

What is claimed is:

1. An isolated nucleic acid molecule selected from the group consisting of:
 - 5 a) a nucleic acid molecule comprising a nucleotide sequence which is at least about 60% identical to the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO: 10, SEQ ID NO:12, or the cDNA insert of the plasmid deposited with ATCC as Accession Number _____, _____ or _____ a complement thereof;
 - 10 b) a nucleic acid molecule comprising a fragment of at least 439 nucleotides of the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:3, the cDNA insert of the plasmid deposited with ATCC as Accession Number _____, or a complement thereof;
 - c) a nucleic acid molecule comprising a fragment of at least 481 nucleotides of the nucleotide sequence of SEQ ID NO:4, SEQ ID NO:6, the cDNA insert of the plasmid deposited with ATCC as Accession Number _____, or a complement thereof;
 - 15 d) a nucleic acid molecule comprising a fragment of at least 2175 nucleotides of the nucleotide sequence of SEQ ID NO:7, SEQ ID NO:9, the cDNA insert of the plasmid deposited with ATCC as Accession Number _____, or a complement thereof;
 - 20 e) a nucleic acid molecule comprising a fragment of at least 439 (**CHECK NUMBER**) nucleotides of the nucleotide sequence of SEQ ID NO:10, SEQ ID NO:12, the cDNA insert of the plasmid deposited with ATCC as Accession Number _____, or a complement thereof;
 - f) a nucleic acid molecule which encodes a polypeptide comprising an amino acid sequence of at least about 60% homologous to the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:11, or an amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Accession Number _____, _____ or _____;
 - 25 g) a nucleic acid molecule which encodes a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:5 or SEQ ID NO:8, or SEQ ID NO:11, wherein the fragment comprises at least 15 contiguous amino acids of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:11, or the
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polypeptide encoded by the cDNA insert of the plasmid deposited with ATCC as
Accession Number _____, _____ or _____; and

- h) a nucleic acid molecule which encodes a naturally occurring allelic
variant of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, SEQ ID
5 NO:5, SEQ ID NO:8, SEQ ID NO:11, or an amino acid sequence encoded by the cDNA
insert of the plasmid deposited with ATCC as Accession Number _____, _____ or
_____, wherein the nucleic acid molecule hybridizes to a nucleic acid molecule
comprising SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:7,
SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:12, or a complement thereof under stringent
10 conditions.

2. The isolated nucleic acid molecule of claim 1, which is selected from the
group consisting of:

- a) a nucleic acid comprising the nucleotide sequence of SEQ ID NO:1, SEQ
15 ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:10,
SEQ ID NO:12, the cDNA insert of the plasmid deposited with ATCC as Accession
Number _____, _____ or _____, or a complement thereof; and
b) a nucleic acid molecule which encodes a polypeptide comprising the
amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:11,
20 or an amino acid sequence encoded by the cDNA insert of the plasmid deposited with
ATCC as Accession Number _____, _____ or _____.

3. The nucleic acid molecule of claim 1 further comprising vector nucleic
acid sequences.

25 4. The nucleic acid molecule of claim 1 further comprising nucleic acid
sequences encoding a heterologous polypeptide.

5. A host cell which contains the nucleic acid molecule of claim 1.

30 6. The host cell of claim 5 which is a mammalian host cell.

7. A non-human mammalian host cell containing the nucleic acid molecule of claim 1.

8. An isolated polypeptide selected from the group consisting of:

5 a) a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:11, or the polypeptide encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number _____, _____ or _____, wherein the fragment comprises at least 15 contiguous amino acids of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:11, or the amino acid
10 sequence encoded by the DNA insert of the plasmid deposited with ATCC as Accession Number _____, _____ or _____;

b) a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:11, or an amino acid sequence encoded by the cDNA insert of the plasmid deposited with
15 ATCC as Accession Number _____, _____ or _____, wherein the polypeptide is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule comprising SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:12 or a complement thereof under stringent conditions; and

20 c) a polypeptide which is encoded by a nucleic acid molecule comprising a nucleotide sequence which is at least 60% identical to a nucleic acid comprising the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:12, or a complement thereof.

25 9. The isolated polypeptide of claim 8 comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:11, or an amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Accession Number _____ or _____.

30 10. The polypeptide of claim 8 further comprising heterologous amino acid sequences.

11. An antibody which selectively binds to a polypeptide of claim 8.

12. A method for producing a polypeptide selected from the group consisting of:

- 5 a) a polypeptide comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:11, or an amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Accession Number _____ or _____;
- 10 b) a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:11, or an amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Accession Number _____, _____ or _____, wherein the fragment comprises at least 15 contiguous amino acids of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:11, or an amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC
- 15 as Accession Number _____ or _____; and
- c) a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:11, or an amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Accession Number _____, _____ or _____, wherein the polypeptide is
- 20 encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule comprising SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO: 12, or a complement thereof under stringent conditions;
- comprising culturing the host cell of claim 5 under conditions in which the
- 25 nucleic acid molecule is expressed.

13. A method for detecting the presence of a polypeptide of claim 8 in a sample, comprising:

- 30 a) contacting the sample with a compound which selectively binds to a polypeptide of claim 8; and
- b) determining whether the compound binds to the polypeptide in the sample.

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14. The method of claim 13, wherein the compound which binds to the polypeptide is an antibody.

15. A kit comprising a compound which selectively binds to a polypeptide of claim 8 and instructions for use.

16. A method for detecting the presence of a nucleic acid molecule of claim 1 in a sample, comprising the steps of:

- a) contacting the sample with a nucleic acid probe or primer which selectively hybridizes to the nucleic acid molecule; and
- b) determining whether the nucleic acid probe or primer binds to a nucleic acid molecule in the sample.

17. The method of claim 16, wherein the sample comprises mRNA molecules and is contacted with a nucleic acid probe.

18. A kit comprising a compound which selectively hybridizes to a nucleic acid molecule of claim 1 and instructions for use.

19. A method for identifying a compound which binds to a polypeptide of claim 8 comprising:

- a) contacting a polypeptide, or a cell expressing a polypeptide of claim 8 with a test compound, and
- b) determining whether the polypeptide binds to the test compound.

20. The method of claim 19, wherein the binding of the test compound to the polypeptide is detected by a method selected from the group consisting of:

- a) detection of binding by direct detecting of test compound/polypeptide binding;
- b) detection of binding using a competition binding assay;
- c) detection of binding using an assay for LGR6-activity.



22. A method for identifying a compound which modulates the activity of a polypeptide of claim 8, comprising:

- 130 -
21. A method for modulating the activity of a polypeptide of claim 8 comprising contacting a polypeptide or a cell expressing a polypeptide of claim 8 with a compound which binds to the polypeptide in a sufficient concentration to modulate the activity of the polypeptide.
22. A method for identifying a compound which modulates the activity of a polypeptide of claim 8, comprising:
- a) contacting a polypeptide of claim 8 with a test compound; and
 - b) determining the effect of the test compound on the activity of the polypeptide to thereby identify a compound which modulates the activity of the polypeptide.

